

What is claimed is:

1. A restraint assembly for a motor vehicle, said restraint assembly comprising:
  - a) a harness secured to a seat within the vehicle and positionable into and out of an occupant restraining position,
  - b) said harness including a lap belt segment and a chest belt segment disposable in spaced relation to one another,
  - c) a diagonal belt segment extending from generally one end of said chest belt segment diagonally between said chest belt segment and said lap belt segment to a generally oppositely disposed end of said lap segment.
2. A restraint assembly as recited in claim 1 further comprising at least one inflatable member mounted on said harness and including a fluid source disposed in communication therewith, said inflatable member cooperatively structured with said fluid source to inflate into an operative orientation protective of the occupant upon the occurrence of an emergency condition.
3. A restraint assembly as recited in claim 2 wherein said operative orientation is defined by a substantially overlying position to the occupant's frontal area.
4. A restraint assembly as recited in claim 2 wherein said inflatable member is extendable outwardly from the harness when inflated into said operative orientation.
5. A restraint assembly as recited in claim 4 wherein said inflatable member is disposed on said harness in substantially aligned orientation to a steering wheel of the vehicle.
6. A restraint assembly as recited in claim 2 wherein said inflatable member is mounted on said diagonal belt segment.

7. A restraint assembly as recited in claim 6 wherein said inflatable member is extendable outwardly from said harness and when inflated into said operative orientation.
8. A restraint assembly as recited in claim 1 wherein at least one of said lap, chest and diagonal belt segments are adjustable into a plurality of positions relative to a vehicle seat to which it is connected.
9. A restraint assembly as recited in claim 8 further comprising a mounting assembly secured to the vehicle seat and adjustably interconnecting an end of said one belt segment to the seat.
10. A restraint assembly as recited in claim 9 wherein said mounting assembly comprises at least one substantially elongated mount secured to the seat, said one end adjustably connected to said mount and movable along the length thereof.
11. A restraint assembly as recited in claim 8 wherein said chest belt is positionable at variable spaced distances from said lap belt segment.
12. A restraint assembly as recited in claim 11 further comprising a mounting assembly secured to the vehicle seat and adjustably interconnecting opposite ends of said chest belt segment to the seat.
13. A restraint assembly as recited in claim 12 wherein said mounting assembly comprises two track structures each attached to said seat, said opposite ends of said chest belt segment movably connected to a different one of said track structures and positionable along the length thereof.
14. A restraint assembly as recited in claim 13 wherein said chest belt segment is disposable into a plurality of different substantially parallel orientations relative to said lap belt segment.

15. A restraint assembly as recited in claim 8 further comprising at least one inflatable member mounted on said harness and including a fluid source disposed in communication therewith, said inflatable member cooperatively structured with said fluid source to inflate into an operative orientation upon the occurrence of an emergency condition.
16. A restraint assembly as recited in claim 15 wherein said inflatable member is mounted on said diagonal belt segment and is extendable outwardly from the harness when inflated into said operative orientation.
17. A restraint assembly as recited in claim 1 wherein at least one of said lap, chest and diagonal belt segments comprise a inflatable section extending along a length thereof and structured to inflate into an operative orientation upon the occurrence of an emergency condition.
18. A restraint assembly as recited in claim 17 wherein said inflatable section comprises at least one inflatable chamber.
19. A restraint assembly as recited in claim 17 comprising a plurality of inflatable chambers collectively extending along at least a portion of a length of said belt segment.
20. A restraint assembly for a motor vehicle, said restraint assembly comprising:
  - a) a harness secured to a seat within the vehicle and positionable into and out of occupant restraining position,
  - b) said harness including a plurality of belt segments disposable in spaced relation to one another
  - c) at least one of said belt segments including a first inflatable member connected thereto and disposed and structured to be extendable outwardly from the harness when inflated, and

- d) a second inflatable member disposed and structured to extend in to an occupant neck area protective configuration when inflated into an operative position.
21. A restraint assembly as recited in claim 20 wherein said second inflatable member mounted on another of said plurality of belt segments, said second inflatable member dimensioned and configured to extend beneath the chin and laterally around opposite sides of the neck of the occupant when inflated.
22. A restraint assembly as recited in claim 20 wherein said other belt segment is disposed in overlying relation to an upper portion of said vehicle seat and is adjustably positionable in a substantially vertical direction.
23. A restraint assembly as recited in claim 22 wherein said other belt segment is disposed in a substantially horizontal orientation when secured.
24. A restraint assembly for a motor vehicle, comprising:
- a) plurality of inflatable members mounted on the vehicle and collectively positioned in substantially surrounding relation to an occupant,
  - b) a fluid source connected to said plurality of inflatable members,
  - c) each of said inflatable members cooperatively structured with said fluid source to inflate into an operative orientation upon the occurrence of an emergency condition,
  - d) a pressure sensing assembly disposed to sense pressure of at least some of said plurality of inflatable members, and
  - e) a processor operatively connected to said pressure sensing assembly and said fluid source, wherein said processor regulates pressure within at least some of said plurality of inflatable members in response to the emergency condition.

- f) said inflatable members comprising at least two ceiling members disposed in an anterior and posterior location relative to an occupant head and cooperatively structured to reduce linear and angular momentum of the head caused by the emergency condition.
25. A restraint assembly as recited in claim 24 wherein one of said two ceiling members is disposed in a stored position substantially behind a sun visor and extends outwardly therefrom towards the occupants head when inflated into said operative orientation.
26. A restraint assembly as recited in claim 25 wherein said activation of said one ceiling member forces a downward positioning of the sun visor.
27. A restraint assembly as recited in claim 24 wherein said inflatable members include at least one window member having a substantially round configuration and a central portion and a peripheral portion disposed in surrounding relation to said central portion and in spaced relation thereto.
28. A restraint assembly as recited in claim 24 wherein said plurality of inflatable members include at least one head rest member connected to a seat head rest when in a stored position and extendable outwardly toward the occupants head when inflated into said operative orientation.
29. A restraint assembly as recited in claim 24 wherein said plurality of inflatable members include a steering wheel member mounted on the vehicle steering wheel when in a stored position and extendable outwardly therefrom toward a frontal area of an occupant when inflated into said operative orientation.
30. A restraint assembly as recited in claim 29 wherein said steering wheel member comprises a substantially round, flat configuration having a diameter larger than that of the steering wheel.

31. A restraint assembly as recited in claim 30 wherein said steering wheel member is disposed in substantially aligned relation with a diagonal belt segment of a restraining harness secured to the occupant.
32. A restraint assembly as recited in claim 31 wherein said plurality of inflatable members comprises a ventral member extendable outwardly from the diagonal belt segment and the occupants frontal area and into confronting relation with the steering wheel member when both of the steering wheel member and the ventral member are inflated into said operative orientation.
33. A restraint assembly as recited in claim 31 wherein said plurality of inflatable members include at least one side member mounted on the vehicle substantially adjacent and outside shoulder of the occupant when in a stored position, said side member extendable outwardly from the side of the vehicle towards the occupant when inflated into said operative orientation.
34. A restraint assembly as recited in claim 31 wherein said plurality of inflatable members include at least one side member mounted on the vehicle substantially adjacent and outside shoulder of the occupant when in a stored position, said side member extendable outwardly from the side of the vehicle towards the occupant when inflated into said operative orientation.
35. A system for restraining occupants of a motor vehicle, comprising:
  - a) a plurality of inflatable members mounted on the vehicle and collectively positioned in substantially surrounding relation to an occupant,
  - b) a fluid source connected to said plurality of inflatable members,
  - c) a pressure sensing assembly disposed to sense pressure of at least some of said plurality of inflatable members,

- d) a plurality of impact detectors positioned to detect a location of an impact between said motor vehicle and an object;
  - e) a processor operatively connected to said pressure sensing assembly, said fluid source, and said impact detectors;
  - f) each of said inflatable members cooperatively structured with said fluid source and said processor to inflate into an operative orientation upon instructions from said processor,
  - g) wherein said processor provides instructions for selectively and sequentially inflating said inflatable members in response to a detected location of an impact, and for regulating pressure within said inflatable members.
36. A system as recited in claim 35, wherein a first one of said inflatable members located intermediate an occupant location and said detected impact location is inflated, and subsequently at least a second one of said inflatable members located opposite from said first inflatable member is inflated.
37. A system as recited in claim 35, wherein said processor receives vehicle speed information, and regulates pressure in said inflatable members based in part on said vehicle speed information.
38. A system as recited in claim 35, wherein said processor receives occupant weight information and regulates pressure in said inflatable members based in part on said occupant weight information.
39. A system as recited in claim 38, wherein said processor received vehicle speed information, and selected inflatable members for inflation based in portion said vehicle speed information.